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                  Now Available for Download
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                  of Author Abstracts
 NEWS  6  FEB 16  New FASTA Display Formats Added to USGENE and PCTGEN
 NEWS  7  FEB 16  INPADOCDB and INPAFAMDB Enriched with New Content
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 NEWS  8  FEB 16  INSPEC Adding Its Own IPC codes and Author's E-mail
                  Addresses
 NEWS  9  APR 02  CAS Registry Number Crossover Limits Increased to
                  500,000 in Key STN Databases
 NEWS 10  APR 02  PATDPAFULL: Application and priority number formats
                  enhanced
 NEWS 11  APR 02  DWPI: New display format ALLSTR available
 NEWS 12  APR 02  New Thesaurus Added to Derwent Databases for Smooth
                  Sailing through U.S. Patent Codes
 NEWS 13  APR 02  EMBASE Adds Unique Records from MEDLINE, Expanding
                  Coverage back to 1948
 NEWS 14  APR 07  CA/CAplus CLASS Display Streamlined with Removal of
                  Pre-IPC 8 Data Fields
 NEWS 15  APR 07  50,000 World Traditional Medicine (WTM) Patents Now
                  Available in CAplus
 NEWS 16  APR 07  MEDLINE Coverage Is Extended Back to 1947

 NEWS EXPRESS FEBRUARY 15 10 CURRENT WINDOWS VERSION IS V8.4.2,
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FILE 'HOME' ENTERED AT 21:44:02 ON 08 MAY 2010

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.22	0.22

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DICTIONARY FILE UPDATES: 7 MAY 2010 HIGHEST RN 1221821-13-1

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=> file hcaplus

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FULL ESTIMATED COST	0.49	0.71

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FILE LAST UPDATED: 7 May 2010 (20100507/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Feb 2010
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Feb 2010

HCAplus now includes complete International Patent Classification (IPC)
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=> s grim? () hydrid? () displacement () law
          2893 GRIM?
        137624 HYDRID?
        130309 DISPLACEMENT
         22826 DISPLACEMENTS
        147052 DISPLACEMENT
                 (DISPLACEMENT OR DISPLACEMENTS)
        195435 LAW
         39219 LAWS
        223956 LAW
                 (LAW OR LAWS)
L1           0 GRIM? (W) HYDRID? (W) DISPLACEMENT (W) LAW

=> s grimm? () hydride
           748 GRIMM?
        119118 HYDRIDE
         27892 HYDRIDES
        128018 HYDRIDE
                 (HYDRIDE OR HYDRIDES)
L2           1 GRIMM? (W) HYDRIDE

=> d l2, ibib abs, 1
THE ESTIMATED COST FOR THIS REQUEST IS 3.10 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:y

L2   ANSWER 1 OF 1  HCAPLUS  COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER:        1985:560581  HCAPLUS
DOCUMENT NUMBER:         103:160581
ORIGINAL REFERENCE NO.:  103:25789a,25792a
TITLE:                   Sila-perfumes and isosteric perfumes.  VII.  Reactions
                         and derivatives of benzyldialkylphosphinimides
AUTHOR(S):               Muenstedt, Rainer; Wannagat, Ulrich
CORPORATE SOURCE:        Inst. Anorg. Anal. Chem., Tech. Univ. Braunschweig,
                         Braunschweig, D-3300, Fed. Rep. Ger.
SOURCE:                  Monatshefte fuer Chemie (1985), 116(1), 7-18
                         CODEN: MOCMB7; ISSN: 0026-9247
DOCUMENT TYPE:           Journal
LANGUAGE:                German
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OTHER SOURCE(S): CASREACT 103:160581
AB Derivs. of benzyldialkylphosphinimides PhCH2PRR':NH (I, R = R' = Me; R = Me, R' = Et) with :NMe, :NSiMe3, :O, :S, CS2- and NH2]NCS- instead of :NH groups were prepared and characterized. They neither show the H/D exchange of CH2 benzyl protons with CDCl3 nor the thermal formation of stilbene on heating like the parent compds. I, but they give, in the case of :NMe and :NSiMe3, analogously, a Horner-Wittig reaction with aldehydes. CS2 reacts with I under NH/S-exchange. The quality of smell of PhCH2PRR':NCH3 (none, later fishy) is quite different from that of isosteric PhCH2SiRR'OMe (flowery-honeylike/minty) and the smell of I (metallic/chlorinated hydrocarbon-like) from that of Grimm hydride isosters PhCH2PRR':O (weak; flowery-waxy). The theory of Amoore (size and shape of mols. control their smell qualities) must be called in question.

=> s bioiososter?
L3 0 BIOIOSOSTER?

=> s bioisoster?
L4 1311 BIOISOSTER?

=> s l4 and review/dt
2374978 REVIEW/DT
L5 120 L4 AND REVIEW/DT

=> s l5 and methyl?
2040753 METHYL?
1032231 ME
12150 MES
1040139 ME
(ME OR MES)
2567759 METHYL?
(METHYL? OR ME)
L6 6 L5 AND METHYL?

=> s l6 and hydrogen
1203618 HYDROGEN
6623 HYDROGENS
1207264 HYDROGEN
(HYDROGEN OR HYDROGENS)
L7 0 L6 AND HYDROGEN

=> d l6, ibib abs, 1-6
THE ESTIMATED COST FOR THIS REQUEST IS 18.60 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:y

L6 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2008:967263 HCAPLUS
DOCUMENT NUMBER: 149:190846
TITLE: Melatonin receptor agonists: SAR and applications to the treatment of sleep-wake disorders
AUTHOR(S): Rivara, Silvia; Mor, Marco; Bedini, Annalida; Spadoni, Gilberto; Tarzia, Giorgio
CORPORATE SOURCE: Dipartimento Farmaceutico, Universita degli Studi di Parma, Parma, 43100, Italy
SOURCE: Current Topics in Medicinal Chemistry (Sharjah, United

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Arab Emirates) (2008), 8(11), 954-968
CODEN: CTMCCL; ISSN: 1568-0266
PUBLISHER: Bentham Science Publishers Ltd.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review. Melatonin (N-acetyl-5-methoxytryptamine) is synthesized and released by the pineal gland following a circadian rhythm characterized by high levels during the night. It shows several pharmacol. effects on diverse cellular and animal models, mainly related to either its antioxidant activity or to its ability to activate specific receptors (MTr). Melatonin is widely used as a self-administered food additive, but its therapeutic potential needs more investigation and is hampered by its poor pharmacokinetics. This review will focus on the medicinal chemical of agonist ligands of the two human GPCRs MT1 and MT2 melatonin receptors. The recent introduction of ramelteon, a non-selective MT1/MT2 agonist for the treatment of insomnia, and the advancement to clin. trials of other MTr agonists have renewed interest for different classes of compds. endowed with this activity. Several chemical classes of MTr agonists are described in the literature, generally characterized by an indole, or an indole bioisostere, carrying an amide side chain and a methoxy group, or substituents with similar stereoelectronic features. Abundant information is available for non-selective MT1/MT2 ligands, and several mol. models, both ligand- and receptor-based, have been proposed to rationalize their structure activity relationships. Fewer classes of selective agonists have been reported in the literature, and they could help clarifying the physiol. role of the two receptor subtypes. A brief discussion on the therapeutic potential of this class of compds. is based on the clin. data available for the agonists ramelteon, agomelatine, β- methyl-6-chloromelatonin (TIK-301) and VEC-162.

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
REFERENCE COUNT: 162 THERE ARE 162 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2005:466071 HCAPLUS
DOCUMENT NUMBER: 144:254284
TITLE: Sugar C-sulfonic and methylene-sulfonic acids
AUTHOR(S): Liptak, Andras; Borbas, Aniko
CORPORATE SOURCE: Szenhidratkemiai Kutatocsoport, MTA-DE, Debrecen, H-4010, Hung.
SOURCE: Magyar Kemiai Folyoirat, Kemiai Kozlemenyek (2004), 109-110(2), 60-63
CODEN: MKFKAL; ISSN: 1418-9933
PUBLISHER: Magyar Kemikusok Egyesulete
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Hungarian

AB A review. Sulfated sugars (sugar sulfuric acid esters) are common representatives of biol. active mols. (glycosaminoglycans, carbohydrate ligands). These esters are rather unstable from a biol. point of view, because they can be cleaved by different esterases or sulfatases. Surprisingly, only one enzymically stable sugar C-sulfonic acid has been found in nature, the 6-deoxy-6-sulfo-D-glucopyranose, that exists in different diacyl-glycerol forms. These substances are constituents of the

membranes of all photosynthetic organisms and show strong anticancer, antiviral and anti-HIV activities. Many syntheses of the 6-deoxy-6-sulfo-D-glucopyranose have been accomplished, but sugars having secondary sulfonic acid function have not been described. Our group synthesized sugar sulfonic acids and sugar methylene sulfonic acids which are bioisosteric with sugar sulfates. The methods applied for the preparation of the thiosugars included nucleophilic displacement reactions and migration of 1,2-trans-1-thio-2-O-sulfonylpyranosides to 1,2-trans-2-thiotrityl glycosides followed by oxidation to 2-C-sulfonic acids either by oxone or H2O2. Methylene sulfonic acids were prepared using free radical addition of either HSAc or NaHSO3 to sugar-exomethylene groups situated in different positions of pyranosides. Sugar sulfoulosonic acids and their 2-thioglycosides were also prepared and used for the syntheses of complex oligosaccharides which could be ligands of adhesion proteins (selectins) or human pathogenic bacteria (Helicobacter pylori).

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L6 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2003:101909 HCAPLUS

DOCUMENT NUMBER: 139:46179

TITLE: Stereostructure-activity studies on agonists at the AMPA and kainate subtypes of ionotropic glutamate receptors

AUTHOR(S): Johansen, Tommy N.; Greenwood, Jeremy R.; Frydenvang, Karla; Madsen, Ulf; Krogsgaard-Larsen, Povl

CORPORATE SOURCE: NeuroScience PharmaBiotec Research Center, Department of Medicinal Chemistry, The Royal Danish School of Pharmacy, Copenhagen, Den.

SOURCE: Chirality (2003), 15(2), 167-179
CODEN: CHRLEP; ISSN: 0899-0042

PUBLISHER: Wiley-Liss, Inc.

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review. (S)-Glutamic acid (Glu), the major excitatory neurotransmitter in the central nervous system, operates through ionotropic as well as metabotropic receptors and is considered to be involved in certain neurol. disorders and degenerative brain diseases that are currently without any satisfactory therapeutic treatment. Until recently, development of selective Glu receptor agonists had mainly been based on lead compds., which were frequently naturally occurring excitants structurally related to Glu. These Glu receptor agonists generally contain heterocyclic acidic moieties, which has stimulated the use of bioisosteric replacement approaches for the design of subtype-selective agonists. Furthermore, most of these leads are conformationally restricted and stereochem. well-defined Glu analogs. Crystallization of the agonist binding domain of the GluR2 subunit of the (RS)-2-amino-3-(3-hydroxy-5-methyl-4-isoxazolyl)propionic acid (AMPA) receptor subtype of ionotropic Glu receptors in the presence or absence of an agonist has provided important information about ligand-receptor interaction mechanisms. The availability of these binding domain crystal structures has formed the basis for rational design of ligands, especially for the AMPA and kainate subtypes of ionotropic Glu receptors. This mini-review will focus on structure-activity relationships on AMPA and kainate receptor agonists

with special emphasis on stereochem. and three-dimensional aspects.
OS.CITING REF COUNT: 21 THERE ARE 21 CAPLUS RECORDS THAT CITE THIS RECORD (21 CITINGS)
REFERENCE COUNT: 83 THERE ARE 83 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1999:547303 HCAPLUS
DOCUMENT NUMBER: 131:280841
TITLE: The [(methoxy)imino]methyl moiety (MOIMM) in the design of a new type of β-adrenergic blocking agent
AUTHOR(S): Balsamo, Aldo; Macchia, Marco; Martinelli, Adriano; Rossello, Armando
CORPORATE SOURCE: Dipartimento di Scienze Farmaceutiche, Universita di Pisa, Pisa, 56126, Italy
SOURCE: European Journal of Medicinal Chemistry (1999), 34(4), 283-291
CODEN: EJMCA5; ISSN: 0223-5234
PUBLISHER: Editions Scientifiques et Medicales Elsevier
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB This review with 31 refs. summarizes the series of studies that led to the recognition of the [(methoxy)imino]methyl moiety (MOIMM) as a bioisoster of aryl groups in the field of β-adrenergic blocking agents.
OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)
REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1999:23966 HCAPLUS
DOCUMENT NUMBER: 130:332046
TITLE: Heterocycles as bioisosteres for the ω-carboxylate moiety of glutamate in AMPA receptor agonists: a review and theoretical study
AUTHOR(S): Greenwood, Jeremy R.; Vaccarella, Graziano; Capper, Hugh R.; Allan, Robin D.; Johnston, Graham A. R.
CORPORATE SOURCE: Adrien Albert Laboratory of Medicinal Chemistry, Department of Pharmacology, University of Sydney, 2006, Australia
SOURCE: Internet Journal of Chemistry [Electronic Publication] (1998), 1, No pp. Given, ARTICLE No. 38
CODEN: IJCHFJ
URL: http://www.ijc.com/articles/1998v1/38/abstract.pdf
PUBLISHER: Internet Journal of Chemistry
DOCUMENT TYPE: Journal; General Review; (online computer file)
LANGUAGE: English
AB A review with 95 refs. (S)-2-Amino-3-(3-hydroxy-5-methylisoxazol-4-yl)propionic acid (AMPA) is the prototypical selective agonist for the AMPA subtype of excitatory amino acid (glutamate) receptors. Several 3-hydroxyisoxazole analogs are known to have activity at this receptor, as do a number of other alanine-substituted heterocyclic phenols, the acidic

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heterocycles being bioisosteres for the ω-carboxylate moiety of glutamate. The increasingly diverse range of known AMPA agonists is reviewed, including a number of novel pyridazine-based analogs. By removal of a common glycine unit, the parent heterocycles 3-hydroxy-4,5-dimethylisoxazole, 3-hydroxy-4,5-dimethylisothiazole, 4-methyl-5-isoxazolone, 3-hydroxy-4-methyl-1,2,5-thiadiazole, 2-methyl-3,5-dioxo-1,2,4-oxadiazolidine, 1-methyluracil, 6-aza-1-methyluracil, and 3-hydroxy-4-methylpyridazine 1-oxide are modeled as representative of the known ω-carboxylate bioisosteres. In addition heterocyclic fragments of inactive hydantoin and 3,5-dioxotriazole quisqualate analogs, and pyridazinone fragments with derivs. of varying potency are considered. These structures and their conjugate bases are subjected to high level ab initio calcns. up to G2(MP2) theory, and semiempirical aqueous phase calcns. using the AM1-SM2 model. Their tautomerism and aqueous pKa behavior are studied in detail, and compared with exptl. data. Mol. geometries and electrostatic potential-derived charge distributions are presented. Electrostatic properties at the Van der Waals surface are compared. Calculated properties are discussed with respect to structural requirements for AMPA receptor activity. Tridentate models of AMPA receptor binding are presented.

L6 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1990:490746 HCAPLUS
DOCUMENT NUMBER: 113:90746
ORIGINAL REFERENCE NO.: 113:15079a,15082a
TITLE: Acidic isostere design: synthetic strategies and recent progress in understanding electronic properties and metabolic stability
AUTHOR(S): Lipinski, Christopher A.; Chenard, Bert L.
CORPORATE SOURCE: Pfizer Cent. Res., Groton, CT, 06340, USA
SOURCE: Pesticide Science (1990), 29(2), 227-40
CODEN: PSSCBG; ISSN: 0031-613X
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 34 refs. The efficient synthesis of a family of twelve acidic heterocycles (mercaptoazoles) of varying acidity from a single common intermediate facilitates the search for new acidic bioisosteres. An extension of this chemical approach led to a new family of phosphonate replacements in prototypes related to the N-methyl-D-aspartate (NMDA) antagonist 2-amino-7-phosphophonheptanoic acid (AP7). Acidic isostere design may be facilitated by grouping hydroxylic heterocycic carboxylic isosteres into one of two electronic classes based on the Gandour hypothesis. The limitations of normal hydroxamic acids as carboxylic acid surrogates suggest that the excellent metabolic stability of reverse hydroxamic acids may be useful in prospective acidic isostere design.
OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

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FILE 'REGISTRY' ENTERED AT 21:44:10 ON 08 MAY 2010

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     FILE 'HCAPLUS' ENTERED AT 21:44:12 ON 08 MAY 2010
L1             0 S GRIM? () HYDRID? () DISPLACEMENT () LAW
L2             1 S GRIMM? () HYDRIDE
L3             0 S BIOIOSOSTER?
L4          1311 S BIOISOSTER?
L5           120 S L4 AND REVIEW/DT
L6             6 S L5 AND METHYL?
L7             0 S L6 AND HYDROGEN

=> s l5 and hydride
         119118 HYDRIDE
          27892 HYDRIDES
         128018 HYDRIDE
                (HYDRIDE OR HYDRIDES)
L8             0 L5 AND HYDRIDE

=> s l5 and pd < 2002
       21977455 PD < 2002
                (PD<20020000)
L9            56 L5 AND PD < 2002

=> d l9, ibib abs, 1-56
THE ESTIMATED COST FOR THIS REQUEST IS 173.60 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:y

L9   ANSWER 1 OF 56  HCAPLUS  COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER:         2003:509718  HCAPLUS
DOCUMENT NUMBER:          139:373962
TITLE:                    Synthesis of new HIV protease inhibitors containing a
                          novel (2-Phenylsulfanyl-1-hydroxyethyl)amide isostere
AUTHOR(S):                Rocheblave, L.; Priem, G.; Courcambeck, J.; De
                          Michelis, C.; Bonnet, B.; Chermann, J. C.; Kraus, J.
                          L.
CORPORATE SOURCE:         Laboratoire de Chimie Biomoleculaire, Faculte des
                          Sciences de Luminy, Universite de la Mediterranee,
                          Marseille, 13288, Fr.
SOURCE:                   Peptides 2000, Proceedings of the European Peptide
                          Symposium, 26th, Montpellier, France, Sept. 10-15,
                          2000 (2001), Meeting Date 2000, 723-724.
                          Editor(s): Martinez, Jean; Fehrentz, Jean-Alain.
                          Editions EDK: Paris, Fr.
                          CODEN: 69EDWK; ISBN: 2-84254-048-4
DOCUMENT TYPE:            Conference; General Review
LANGUAGE:                 English
AB   A review of the authors' work on designing new Amprenavir
     bioisosteres as anti-HIV agents.
REFERENCE COUNT:          8     THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS
                                RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9   ANSWER 2 OF 56  HCAPLUS  COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER:         2002:358028  HCAPLUS
DOCUMENT NUMBER:          138:112069
TITLE:                    Strategies in medicinal chemistry for the discovery of
                          new lead-compounds for drugs
AUTHOR(S):                Barreiro, Eliezer Jesus; Fraga, Carlos Alberto
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Manssour; Rodrigues, Carlos Rangel; Palhares de Miranda, Ana Luisa
CORPORATE SOURCE: LASSBio, Dep. Farmacos, Fac. Farmacia, Univ. Federal do Rio de Janeiro, Rio de Janeiro, 21944-900, Brazil
SOURCE: Revista Brasileira de Ciencias Farmaceuticas (2001), 37(3), 269-292
CODEN: RBCFFM; ISSN: 1516-9332
PUBLISHER: Universidade de Sao Paulo, Faculdade de Ciencias Farmaceuticas
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Portuguese
AB A review with refs. This paper describes some examples of the mol. hybridization and bioisosterism strategies in the design of new lead-compds. candidates with antiinflammatory, anti-thrombotic and analgesic properties, using the physiol. approach. Several lead-compds. were obtained exploring the chemical functionalities of an abundant Brazilian natural product, for instance safrole the principal chemical constituent of sassafras oil and some Piper sp.
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
REFERENCE COUNT: 92 THERE ARE 92 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2002:132140 HCAPLUS
DOCUMENT NUMBER: 136:308556
TITLE: Highly efficient semisynthesis of biologically active epothilone derivatives
AUTHOR(S): Vite, Gregory D.; Borzilleri, Robert M.; Kim, Soong-Hoon; Regueiro-Ren, Alicia; Humphreys, W. Griffith; Lee, Francis Y. F.
CORPORATE SOURCE: Pharmaceutical Research Institute, Bristol-Myers Squibb Company, Princeton, NJ, 08543-4000, USA
SOURCE: ACS Symposium Series (2001), 796(Anticancer Agents), 97-111
CODEN: ACSMC8; ISSN: 0097-6156
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review. Novel epothilone derivs. were prepared by both total synthesis and semisynthesis. Comparison of the two strategies suggests that a semisynthesis approach has several practical advantages including ease of preparation, stereochem. control, and potential for scale-up. Synthetic chemical
for efficient deoxygenation of epothilones, preparation of epoxide bioisosteres, and an efficient lactone-to-lactam conversion are presented. In vitro biol. data for the new epothilone analogs are provided, along with preliminary in vivo data for clin. candidate BMS-247550.
OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)
REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 4 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2001:872304 HCAPLUS

Updated Search

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DOCUMENT NUMBER: 136:151211
TITLE: (α-Monofluoroalkyl)phosphonates: a class of isoacidic and "tunable" mimics of biological phosphates
AUTHOR(S): Berkowitz, David B.; Bose, Mohua
CORPORATE SOURCE: Department of Chemistry, University of Nebraska, Lincoln, NE, 68588-0304, USA
SOURCE: Journal of Fluorine Chemistry (2001), 112(1), 13-33
CODEN: JFLCAR; ISSN: 0022-1139
PUBLISHER: Elsevier Science S.A.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review. In the early 1980s, Blackburn and McKenna suggested that α-fluorination might lead to phosphonates that better mimic natural phosphates. Although α-monofluorination produces phosphonates with "matching" second pKa values, the α,α-difluorinated phosphonates have received more attention in the past decade or so. Recently, reported enzyme kinetic data on the α-monofluorinated phosphonates from the O'Hagan laboratory and from our laboratory suggest that the CHF stereochem. does affect enzyme-binding, thereby providing an addnl. variable that may be tuned to achieve optimal binding to an active site of interest. This asymmetry also appears in structural data from the groups of Barford/Burke and Tracey on PTP1B complexes with bound α,α-difluorinated phosphonate inhibitors. In those complexes, only one of two prochiral fluorine atoms appears to interact appreciably with the enzyme. Namely, it is thought that the pro-R (Fsi) fluorine is engaged in an important hydrogen bond with the Phe-182 amide NH.Available methods for the synthesis of this class of α-monofluorinated phosphonates are reviewed. A new convergent approach, developed at Nebraska, in which the potassium anion of (α-fluoro-α-phenylsulfonylmethyl)phosphonate is used to displace primary triflates is also described. This method is particularly convenient as it allows one to perform a "fluorinated phosphonate scan" of an active site of interest (in what follows, we use this expression to designate the synthesis and evaluation of a complete set of the CH2-, CF2- and both stereoisomeric CHF-phosphonates in an active site of interest) from a single primary triflate. The properties of the title compds. in enzyme active sites are discussed, as are possible interactions of these fluorine-containing bioisosteres with active site residues.
OS.CITING REF COUNT: 62 THERE ARE 62 CAPLUS RECORDS THAT CITE THIS RECORD (62 CITINGS)
REFERENCE COUNT: 92 THERE ARE 92 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 5 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2001:578555 HCAPLUS
DOCUMENT NUMBER: 136:146443
TITLE: Studies on the synthesis of herbicides having five-membered heterocycles as the core skeleton
AUTHOR(S): Kudo, Noriaki
CORPORATE SOURCE: Agrosci. Res. Lab., Sankyo Co., Ltd., 1041, Yasu, Yasu-cho, Yasu-gun, Shiga, 520-2342, Japan
SOURCE: Gifu Yakka Daigaku Kiyo (2001), 50, 49-60
CODEN: GYDKA9; ISSN: 0434-0094

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PUBLISHER: Gifu Yakka Daigaku
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A review. Bioisoteric transformation of known bioactive compds. is one of the most efficient methods in drug design. If a new example of a bioisostere is found, it is possible to synthesize new bioactive compds., which have never been synthesized before, having a novel skeleton. The author set up the new bioisosteric hypothesis that a ring carbon-chlorine atom is bioisosteric to a carbon-alkylthio group and that a ring nitrogen atom is bioisosteric to a carbon-chlorine atom or a carbon-fluorine atom. To confirm this hypothesis, novel compds. were designed and synthesized, and their herbicidal activities were investigated.

L9 ANSWER 6 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2001:546779 HCAPLUS
DOCUMENT NUMBER: 135:313000
TITLE: The use of bioisosteric groups in lead optimization
AUTHOR(S): Olesen, Preben H.
CORPORATE SOURCE: Medicinal Chemistry Research, Novo Nordisk A/S, Maaloev, 2760, Den.
SOURCE: Current Opinion in Drug Discovery & Development (2001), 4(4), 471-478
CODEN: CODDFF; ISSN: 1367-6733
PUBLISHER: PharmaPress Ltd.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with refs. It is now half a century since Friedman introduced the term bioisosterism for the similar biol. activity of structurally related compds. Since then, the concept has been used extensively and successfully in the optimization of lead compds. in drug discovery. The number of chemical lead compds. has expanded enormously in recent years due to the expression of an increasing number of recombinant proteins, and the screening of these new protein targets against a large number of compds. in high-throughput screens. For the fine-tuning of lead compds. to obtain candidates suitable for clin. trials, which is in most circumstances still a tedious process, the use of bioisosteric replacement can be of significant value. This is especially the case in optimizing for selectivity for a specific target and in improving the pharmacokinetic properties of lead compds. The use of bioisosteres in lead optimization is illustrated by some recent examples from the literature.
OS.CITING REF COUNT: 34 THERE ARE 34 CAPLUS RECORDS THAT CITE THIS RECORD (34 CITINGS)
REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 7 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2001:538924 HCAPLUS
DOCUMENT NUMBER: 135:352160
TITLE: SH2 domain inhibition: a problem solved?
AUTHOR(S): Shakespeare, W. C.
CORPORATE SOURCE: ARIAD Pharmaceuticals, Inc., Cambridge, MA, 02139-4234, USA
SOURCE: Current Opinion in Chemical Biology (2001),

Updated Search

5(4), 409-415
CODEN: COCBF4; ISSN: 1367-5931
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with refs. The past two years have witnessed a number of significant advances in the design of SH2 inhibitors of both Src and Grb2. For Src, several non-peptide templates have been developed with high affinity, and one case, in the context of bone-binding phosphotyrosine bioisostere, has yielded an in vivo active antiresorptive agent. Similarly, high-affinity Grb2 SH2 inhibitors with novel phosphotyrosine replacements have now been reported that demonstrate, for the first time, cellular activities consistent with an anticancer agent.
OS.CITING REF COUNT: 64 THERE ARE 64 CAPLUS RECORDS THAT CITE THIS RECORD (64 CITINGS)
REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 8 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2001:456661 HCAPLUS
DOCUMENT NUMBER: 135:211174
TITLE: The Cyclohexene Ring as Bioisostere of a Furanose Ring: Synthesis and Antiviral Activity of Cyclohexenyl Nucleosides
AUTHOR(S): Herdewijn, P.; De Clercq, E.
CORPORATE SOURCE: Rega Institute for Medical Research, Laboratory of Medicinal Chemistry, K.U. Leuven, Minderbroedersstraat, Leuven, B-3000, Belg.
SOURCE: Bioorganic & Medicinal Chemistry Letters (2001), 11(12), 1591-1597
CODEN: BMCLE8; ISSN: 0960-894X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 16 refs. on the application of the bioisosteric concept between a furanose ring and a cyclohexene ring in the nucleoside field has led to the discovery of new potent antiviral agents.
OS.CITING REF COUNT: 24 THERE ARE 24 CAPLUS RECORDS THAT CITE THIS RECORD (24 CITINGS)
REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 9 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2001:168706 HCAPLUS
DOCUMENT NUMBER: 135:174444
TITLE: Antifungal and immunomodulating activities of 1,4-benzothiazine azole derivatives: review
AUTHOR(S): Fringuelli, R.; Schiaffella, F.; Vecchiarelli, A.
CORPORATE SOURCE: Department of Drug Chemistry and Technology, Department of Experimental Medicine and Biochemical Sciences, University of Perugia, Perugia, 06123, Italy
SOURCE: Journal of Chemotherapy (Firenze, Italy) (2001), 13(1), 9-14
CODEN: JCHEEU; ISSN: 1120-009X
PUBLISHER: E.I.F.T. srl
DOCUMENT TYPE: Journal; General Review

LANGUAGE: English
AB A review and discussion with 41 refs. on the in vitro and in vivo antifungal activity of 1,4-benzothiazine azole derivs. (1,4-BT). A number of different 1,4-BT have been tested for anti-Candida activity, investigating their N-4 substitution, sulfur oxidation state, presence of the carbonyl group in C-3, insertion of the side chain on C-6, C-7, or C-8 of the benzothiazine nucleus, and the nature of the azolic substituent (triazole or imidazole), which tend to differ. Moreover, benzoxazine analogs have been tested to evaluate the effect of sulfur bioisosteric substitution on their activity. The authors found that their antifungal activity correlates with well-defined chemical characteristics including the presence of ether substitution at the side chain. In fact, ether derivs. are the most active compds. in vivo, although they have little anti-Candida effect in vitro. This discrepancy could be attributed to the fact that 1,4-BT are metabolized to active antifungal compds. and may have in vivo activity through improvement of protective immune response and direct antifungal effects. In fact, 1,4-BT also show immunomodulating activity so that the direct antifungal activity, in combination with the capability to stimulate the immune response, could result in a significant increase in in vivo efficacy.
OS.CITING REF COUNT: 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)
REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 10 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2000:490729 HCAPLUS
DOCUMENT NUMBER: 133:249335
TITLE: The 2-pyridone antibacterial agents: Bacterial topoisomerase inhibitors
AUTHOR(S): Li, Qun; Mitscher, Lester A.; Shen, Linus L.
CORPORATE SOURCE: Pharmaceutical Products Division, Abbott Laboratories, Abbott Park, IL, 60064-6101, USA
SOURCE: Medicinal Research Reviews (2000), 20(4), 231-293
CODEN: MRREDD; ISSN: 0198-6325
PUBLISHER: John Wiley & Sons, Inc.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 132 refs. Many attempts have been made to prepare analogs of 4-quinolone antibacterial agents bearing novel ring systems, which might retain the favorable properties of these widely used antibacterial agents and at the same time increase activity against multidrug-resistant bacteria, streptococci, and anaerobic microorganisms. One such attempt involved bioisosteric exchange of the 1-N atom and 4a-C atom of naphthyridones, quinolones, and benzoxazines to produce a family of highly active pyridopyrimidines, quinolizines, and ofloxacin bioisosteres . These new antibacterial agents have been named collectively as the 2-pyridones. Many hundreds of 2-pyridones have been synthesized and evaluated in vitro and in vivo, and selected members are advancing toward human clin. trials. Preparation of these bioisosteres required the development of enabling chemical, as previous methods were unsuccessful in producing the needed core structures. This review compares the structure-activity relationships of these agents with known trends among 4-quinolones, from which it is seen that there are many parallels, but also some significant departures as well. Generally, 2-pyridones are more

highly active in vitro and in vivo and more water soluble than comparable 4-quinolones. These properties are posited to arise from electronic and conformational alternations in these new substances. Selected members show excellent pharmacodynamic properties, justifying the view that this is a very promising new class of totally synthetic antibacterial agents.

OS.CITING REF COUNT: 65 THERE ARE 65 CAPLUS RECORDS THAT CITE THIS RECORD (66 CITINGS)

REFERENCE COUNT: 133 THERE ARE 133 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 11 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2000:479474 HCAPLUS

DOCUMENT NUMBER: 133:237880

TITLE: Recent applications of the isoxazole ring in medicinal chemistry

AUTHOR(S): Pevarello, Paolo; Amici, Raffaella; Brasca, Maria Gabriella; Villa, Manuela; Varasi, Mario

CORPORATE SOURCE: Department of Chemistry, Pharmacia and Upjohn, Milan, 20014, Italy

SOURCE: Targets in Heterocyclic Systems (1999), 3, 301-339
CODEN: THSYFJ

PUBLISHER: Societa Chimica Italiana

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB The present review, with >99 refs., deals with recent advances in the use of the isoxazole ring as applied to the synthesis of potential medicines. The versatility of isoxazole chemical together with its proven ability to bioisosterically replace different functional groups has conferred this heterocyclic moiety a privileged role in medicinal chemical

OS.CITING REF COUNT: 20 THERE ARE 20 CAPLUS RECORDS THAT CITE THIS RECORD (20 CITINGS)

REFERENCE COUNT: 138 THERE ARE 138 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 12 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1999:750002 HCAPLUS

DOCUMENT NUMBER: 132:78581

TITLE: Bioorganogermanium chemistry: studies on C/Si/Ge bioisosterism

AUTHOR(S): Tacke, R.; Heinrich, T.; Kornek, T.; Merget, M.; Wagner, A.; Gross, J.; Keim, C.; Lambrecht, G.; Mutschler, E.; Beckers, T.; Bernd, M.; Reissmann, T.

CORPORATE SOURCE: Institut fur Anorganische Chemie, Universitat Wurzburg, Wurzburg, D-97074, Germany

SOURCE: Phosphorus, Sulfur and Silicon and the Related Elements (1999), 150-151, 69-87
CODEN: PSSLEC; ISSN: 1042-6507

PUBLISHER: Gordon & Breach Science Publishers

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB In context with systematic studies on C/Si/Ge bioisosterism, the following studies were carried out: (a) synthesis and pharmacol. characterization of centrochiral enantiomerically pure Ge-based muscarinic

antagonists; (b) synthesis and pharmacol. characterization of a Ge-containing decapeptide; (c) studies on the metabolism of a Ge-based drug in the rat; (d) synthesis of centrochiral enantiomerically pure germanes using biotransformations with whole microorganisms or isolated enzymes. There are distinct bioisosteric relations between the C/Si/Ge analogs studied. A review with 24 refs.

OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 13 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1999:574966 HCAPLUS

DOCUMENT NUMBER: 131:294974

TITLE: The 2-pyridone antibacterial agents: 8-position modifications

AUTHOR(S): Fung, Anthony K. L.; Shen, Linus L.

CORPORATE SOURCE: Infectious Disease Research, Pharmaceutical Discovery, Abbott Laboratories, Abbott Park, IL, 60064-3500, USA

SOURCE: Current Pharmaceutical Design (1999), 5(7), 515-543
CODEN: CPDEFP; ISSN: 1381-6128

PUBLISHER: Bentham Science Publishers

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review with 21 refs. Improved potency against multiply resistant streptococci and anaerobic microorganisms relative to current antibiotics has been sought by many labs. around the world. As one result of attempts to prepare analogs of 4-quinolone anti-infectives bearing novel ring systems, the 2-pyridones were discovered. The 2-pyridones, which are bioisosteres of 4-quinolones, are highly active against a wide range of resistant strains of bacteria. Several hundreds of 2-pyridones have been synthesized incorporating modifications at various positions. In order to reduce the complexity of this review, only the widely adopted 8-position modifications (corresponding to the 7-position of the quinolones) will be discussed here. From scientific publications and patents, it is clear that many of the 2-pyridones are very promising candidates and yet only selective members of these compds. have been advanced to detailed preclin. trials. Among the promising candidates, A-170568 was demonstrated to have the best overall profile in terms of the in vitro and in vivo antibacterial activities, safety profile, and tissue penetration.

OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 14 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1999:547303 HCAPLUS

DOCUMENT NUMBER: 131:280841

TITLE: The [(methoxy)imino]methyl moiety (MOIMM) in the design of a new type of β-adrenergic blocking agent

AUTHOR(S): Balsamo, Aldo; Macchia, Marco; Martinelli, Adriano; Rossello, Armando

CORPORATE SOURCE: Dipartimento di Scienze Farmaceutiche, Universita di

Pisa, Pisa, 56126, Italy
SOURCE: European Journal of Medicinal Chemistry (1999), 34(4), 283-291
CODEN: EJMCA5; ISSN: 0223-5234
PUBLISHER: Editions Scientifiques et Medicales Elsevier
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB This review with 31 refs. summarizes the series of studies that led to the recognition of the [(methoxy)imino]methyl moiety (MOIMM) as a bioisoster of aryl groups in the field of β-adrenergic blocking agents.
OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)
REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 15 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1999:443547 HCAPLUS
DOCUMENT NUMBER: 131:208341
TITLE: A new class of diacidic nonpeptide angiotensin II receptor antagonists: candesartan cilexetil
AUTHOR(S): Naka, Takehiko; Kubo, Keiji
CORPORATE SOURCE: Pharmaceutical Research Laboratories II, Pharmaceutical Research Division, Takeda Chemical Industries, Ltd., Osaka, 532-8686, Japan
SOURCE: Current Pharmaceutical Design (1999), 5(6), 453-472
CODEN: CPDEFP; ISSN: 1381-6128
PUBLISHER: Bentham Science Publishers
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 38 refs. Blockade of the action of angiotensin II (AII) has long been a target for development of novel antihypertensive agents. We recently discovered a novel class of potent nonpeptide AII receptor antagonists, benzimidazole-7-carboxylic acids including candesartan. Candesartan is a highly potent and insurmountable angiotensin II type-1 receptor (AT1)-selective antagonist. Structure-activity relationship (SAR) studies revealed that the adjacent arrangement of a lipophilic substituent, a tetrazolylbiphenylmethyl moiety and a carboxyl group was the important structural requirement for potent AII antagonistic activity. The benzimidazole ring was found to be one of the most suitable templates arranging these three essential components in correct direction. Especially, the presence of a carboxyl group at the 7-position was found to be essential for insurmountable antagonism. Although candesartan is a very potent AII antagonist, it was found to be absorbed rather inefficiently upon oral administration. To improve bioavailability (BA) of candesartan, chemical modification was examined to yield candesartan cilexetil, a prodrug of candesartan. Candesartan cilexetil is a potent and long-acting blocker that provides effective 24 h blood pressure control. Our alternative research efforts to improve oral BA was performed by replacement of the tetrazole ring in candesartan by other new acidic bioisosteric heterocyclic rings to find the nonprodrug AII antagonist TAK-536, bearing 5-oxo-1,2,4-oxadiazole ring, which was as potent and orally active as candesartan cilexetil.
OS.CITING REF COUNT: 37 THERE ARE 37 CAPLUS RECORDS THAT CITE THIS RECORD (37 CITINGS)

REFERENCE COUNT: 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 16 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1999:170992 HCAPLUS
DOCUMENT NUMBER: 130:306688
TITLE: Melatonin receptor ligands
AUTHOR(S): Steinhilber, Dieter; Carlberg, Carsten
CORPORATE SOURCE: Institute of Pharmaceutical Chemistry, University of Frankfurt, Frankfurt, D-60439, Germany
SOURCE: Expert Opinion on Therapeutic Patents (1999), 9(3), 281-290
CODEN: EOTPEG; ISSN: 1354-3776
PUBLISHER: Ashley Publications
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 71 refs. The hormone melatonin is released following a circadian rhythm with highest levels during the subjective night. It regulates a variety of physiol. and neuroendocrine functions through activation of G-protein-coupled membrane receptors in target tissues. The lipophilic structure of melatonin also suggests an intracellular function and the nuclear receptor RZR/ROR was associated with a direct gene regulatory action of the hormone. In recent years, many putative ligands for membrane bound melatonin receptors have been synthesized, which represent indole derivs. or contain bioisosteric moieties and have structural elements identical or similar to the functional groups in the melatonin mol. Two mammalian melatonin receptors (mt1 and MT2) with 60% homol. at amino acid level have been cloned and simplify the search for selective agonists and antagonists. Recently, several ligands with a considerable selectivity for the MT2 receptor have been identified. In addition, many melatonergic compds. have been patented and claimed to be useful for the treatment of depression, sleep disorders, disturbances of the circadian rhythm, anxiety disorders, cardiovascular diseases and cancer. Thiazolidinedione derivs. have been identified as structurally distinct but functional melatonin analogs that seem to act via the nuclear receptor RZR/ROR. These compds. exhibit potent anti-arthritic activity and may also have a therapeutic potential against several types of cancer.
OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)
REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 17 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1999:160555 HCAPLUS
DOCUMENT NUMBER: 131:746
TITLE: Conformationally Constrained Analogs of L-Glutamate as Subtype-Selective Modulators of Metabotropic Glutamate Receptors
AUTHOR(S): Ma, Dawei
CORPORATE SOURCE: Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Shanghai, 200032, Peop. Rep. China
SOURCE: Bioorganic Chemistry (1999), 27(1), 20-34
CODEN: BOCMBM; ISSN: 0045-2068
PUBLISHER: Academic Press
DOCUMENT TYPE: Journal; General Review

LANGUAGE: English
AB A review, with 74 refs. In order to better characterize the roles of metabotropic glutamate receptors (mGluRs) in physiol. processes, there is an important need to develop novel, high affinity ligands which are family and subtype specific. Many advances have been made in the identification of useful ligands with subtype selectivity in the past five years. From a structural viewpoint, these new ligands are actually analogs of L-glutamate. In the course of designing mGluR ligands, two major modification methods were used, one was bioisosterism and the other was incorporation of conformational constraints. For space reasons, this review will focus only on the discussion of the structural features of these ligands as agonists and antagonists. According to their structural difference, mGluR ligands can be divided into four major classes, namely analogs of (1S,3R)-1-aminocyclopentane-1,3-dicarboxylic acid (ACPD), analogs of L-2-(carboxycyclopropyl)glycine (CCG), analogs of phenylglycine, and analogs of L-AP4. (c) 1999 Academic Press.
OS.CITING REF COUNT: 12 THERE ARE 12 CAPLUS RECORDS THAT CITE THIS RECORD (12 CITINGS)
REFERENCE COUNT: 74 THERE ARE 74 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 18 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1999:23966 HCAPLUS
DOCUMENT NUMBER: 130:332046
TITLE: Heterocycles as bioisosteres for the ω-carboxylate moiety of glutamate in AMPA receptor agonists: a review and theoretical study
AUTHOR(S): Greenwood, Jeremy R.; Vaccarella, Graziano; Capper, Hugh R.; Allan, Robin D.; Johnston, Graham A. R.
CORPORATE SOURCE: Adrien Albert Laboratory of Medicinal Chemistry, Department of Pharmacology, University of Sydney, 2006, Australia
SOURCE: Internet Journal of Chemistry [Electronic Publication] (1998), 1, No pp. Given, ARTICLE No. 38
CODEN: IJCHFJ
URL: http://www.ijc.com/articles/1998v1/38/abstract.pdf
PUBLISHER: Internet Journal of Chemistry
DOCUMENT TYPE: Journal; General Review; (online computer file)
LANGUAGE: English
AB A review with 95 refs. (S)-2-Amino-3-(3-hydroxy-5-methylisoxazol-4-yl)propionic acid (AMPA) is the prototypical selective agonist for the AMPA subtype of excitatory amino acid (glutamate) receptors. Several 3-hydroxyisoxazole analogs are known to have activity at this receptor, as do a number of other alanine-substituted heterocyclic phenols, the acidic heterocycles being bioisosteres for the ω-carboxylate moiety of glutamate. The increasingly diverse range of known AMPA agonists is reviewed, including a number of novel pyridazine-based analogs. By removal of a common glycine unit, the parent heterocycles 3-hydroxy-4,5-dimethylisoxazole, 3-hydroxy-4,5-dimethylisothiazole, 4-methyl-5-isoxazolone, 3-hydroxy-4-methyl-1,2,5-thiadiazole, 2-methyl-3,5-dioxo-1,2,4-oxadiazolidine, 1-methyluracil, 6-aza-1-methyluracil, and 3-hydroxy-4-methylpyridazine 1-oxide are modeled as representative of the known ω-carboxylate bioisosteres. In addition heterocyclic fragments of inactive hydantoin and

3,5-dioxotriazole quisqualate analogs, and pyridazinone fragments with derivs. of varying potency are considered. These structures and their conjugate bases are subjected to high level ab initio calcns. up to G2(MP2) theory, and semiempirical aqueous phase calcns. using the AM1-SM2 model. Their tautomerism and aqueous pKa behavior are studied in detail, and compared with exptl. data. Mol. geometries and electrostatic potential-derived charge distributions are presented. Electrostatic properties at the Van der Waals surface are compared. Calculated properties are discussed with respect to structural requirements for AMPA receptor activity. Tridentate models of AMPA receptor binding are presented.

L9 ANSWER 19 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1998:798894 HCAPLUS
DOCUMENT NUMBER: 130:148126
TITLE: Bioisosteric approach in the design of new dopaminergic/serotonergic ligands
AUTHOR(S): Soskic, V.; Joksimovic, Jelena
CORPORATE SOURCE: Institute for Biological Research, Belgrade, 11060, Yugoslavia
SOURCE: Current Medicinal Chemistry (1998), 5(6), 493-512
CODEN: CMCHE7; ISSN: 0929-8673
PUBLISHER: Bentham Science Publishers
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 102 refs. Dopaminergic and serotonergic ligands are widely applied in the therapy of some severe diseases in humans connected to the malfunctioning of the corresponding membrane receptors within the CNS. However, no pharmaceuticals of this type with an ideal therapeutic index have been synthesized so far and there is a constant need of producing new dopaminergic/serotonergic ligands with improved properties especially with regard to undesirable side effects expressed after a prolonged therapy. Dopaminergic/serotonergic ratio turned out to be important for a fine tuning of pharmacol. profile of new ligands. Employing a bioisosteric approach, we have synthesized numerous quinoxalinediones, benztriazoles, benzimidazoles and 2-substituted benzimidazoles as potential dopaminergic and/or mixed dopaminergic/serotonergic compds. With this purpose, benzimidazole and its derivs. were incorporated into phenylethylamine, 3- and 4-substituted phenylethylpiperidine, 1-substituted 4-arylpiperazine and semirigid 2-aminotetralin frame and the resulting ligands were checked for the binding affinity at the D1 and D2 dopamine and 5-HT1A serotonin receptors in radioligand binding assays in vitro. Synaptosomal membranes prepared from bovine caudate nuclei and hippocampi served as a source of the dopamine and serotonin receptors, resp. [3H]SCH 23390 (D1 receptor-selective), [3H]spiperone (D2 receptor-selective) and 8-OH-[3H]DPAT (5-HT1A receptor-selective) were employed as radioligands in competition binding assays. Properties of substituents introduced into position 2 of benzimidazole ring, as well as the nature of the frame into which benzimidazole pharmacophore was incorporated have been shown to determine ligand binding affinity, mode of action and receptor preference, i.e. dopaminergic/serotonergic affinity ratio. Benzimidazolyl-2-thione and benztriazole derivs. were the most potent dopaminergic/serotonergic ligands. Mol. ab initio calcns. of the electronic properties of pharmacophoric entities of the new ligands revealed different electron d. distribution around the benzene ring in the active and inactive ligands.

It can be assumed that this difference influences the properties of π–π interactions in a receptor–ligand complex. The results are discussed in comparison with the data of other authors working on similar topics.

OS.CITING REF COUNT: 20 THERE ARE 20 CAPLUS RECORDS THAT CITE THIS RECORD (20 CITINGS)
REFERENCE COUNT: 102 THERE ARE 102 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 20 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1998:695472 HCAPLUS
DOCUMENT NUMBER: 130:60493
TITLE: Design and development of isoxazole amino acids as ligands for ionotropic excitatory amino acid receptors
AUTHOR(S): Madsen, Ulf; Slok, Frank A.; Johansen, Tommy N.; Ebert, Bjarke; Krogsgaard-Larsen, Povl
CORPORATE SOURCE: PharmaBiotec Research Center, Department of Medicinal Chemistry, Royal Danish School of Pharmacy, Copenhagen, DK-2100, Den.
SOURCE: Current Topics in Medicinal Chemistry (1997), 2, 1-14
CODEN: CTMCFO
PUBLISHER: Research Trends
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review, with 85 refs. Glutamic acid functions as the major excitatory amino acid transmitter in the central nervous system. Glutamic acid receptors are implicated in a number of physiol. and pathophysiol. mechanisms, and much pharmacol. and therapeutic interest is focused on these receptors. Fast excitatory neurotransmission is mediated through ionotropic glutamic acid receptors, of which NMDA and AMPA receptors are the best characterized. A number of selective ligands for both of these receptor types have been synthesized. The naturally occurring excitatory amino acid, ibotenic acid, has been an important lead structure involving design of conformationally restricted analogs and heterocyclic analogs, bioisosteric groups and resolution of chiral compds. The development of potent and highly selective agonists and antagonists have shed light on the structural requirements for activation and blockade of these receptors. The principle of functional partial agonism is demonstrated in vitro using full agonists and competitive antagonists at AMPA and NMDA receptors.

OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)
REFERENCE COUNT: 85 THERE ARE 85 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 21 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1998:442463 HCAPLUS
DOCUMENT NUMBER: 129:77998
ORIGINAL REFERENCE NO.: 129:16029a,16032a
TITLE: Bioisosterism and molecular diversity
AUTHOR(S): Clark, Robert D.; Ferguson, Allan M.; Cramer, Richard D.
CORPORATE SOURCE: Tripos, Inc., St. Louis, MO, 63144, USA
SOURCE: Perspectives in Drug Discovery and Design (

1998), 9/10/11(3D QSAR in Drug Design: Ligand/Protein Interactions and Molecular Similarity), 213-224
CODEN: PDDDEC; ISSN: 0928-2866
PUBLISHER: Kluwer Academic Publishers
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 27 refs. is given on bioisosterism and mol. diversity including theor. considerations, topomeric comparative mol. field anal. (CoMFA), inertial field orientation (IFO-CoMFA), and validation.
OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

L9 ANSWER 22 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1998:326093 HCAPLUS
DOCUMENT NUMBER: 128:308410
ORIGINAL REFERENCE NO.: 128:61137a,61140a
TITLE: Applications of bioisosterism in development of agrochemicals
AUTHOR(S): Liu, Changling
CORPORATE SOURCE: Shenyang Research Institute Chemical Industry, Shenyang, 110021, Peop. Rep. China
SOURCE: Nongyao (1998), 37(2), 1-7
CODEN: NONGFP; ISSN: 1006-0413
PUBLISHER: Nongyao Bianjibu
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Chinese
AB A review with 5 refs. on the concept of bioisosterism, and its applications in development of agrochems. Many examples of its successful applications were described.
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L9 ANSWER 23 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1998:72629 HCAPLUS
DOCUMENT NUMBER: 128:212440
ORIGINAL REFERENCE NO.: 128:41893a,41896a
TITLE: A new class of diacidic nonpeptide angiotensin II receptor antagonists
AUTHOR(S): Naka, Takehiko
CORPORATE SOURCE: Pharmaceutical Research Laboratories 1, Takeda Chemical Industries, Ltd., Osaka, 532, Japan
SOURCE: Medicinal Chemistry: Today and Tomorrow, Proceedings of the AFMC International Medicinal Chemistry Symposium, Tokyo, Sept. 3-8, 1995 (1997), Meeting Date 1995, 89-96. Editor(s): Yamazaki, Mikio. Blackwell: Oxford, UK.
CODEN: 65ONAG
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review with 12 refs. Blockade of the action of angiotensin II (AII) has long been a target for development of novel antihypertensive agents. We recently discovered a novel class of potent nonpeptide AII receptor antagonists, benzimidazole-7-carboxylic acids (e.g., CV-11974). TCV-116, the prodrug of CV-11974, showed highly potent AII antagonistic and

antihypertensive activities at oral administration. Structure-activity relationship (SAR) studies revealed that the adjacent arrangement of a lipophilic substituent, a tetrazolylbiphenyl moiety and a carboxyl group was the important structural requirement for potent AII antagonistic activity. Our efforts to find a new acidic bioisostere as a tetrazole replacement, resulted in the discovery of TAK-536 having 5-oxo-1,2,4-oxadiazole ring, which showed both potent AII antagonistic and antihypertensive activity and good oral bioavailability comparable to that of TCV-116.

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 24 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1997:788839 HCAPLUS
DOCUMENT NUMBER: 128:84431
ORIGINAL REFERENCE NO.: 128:16349a,16352a
TITLE: Recent developments in melatonin receptor ligands
AUTHOR(S): Mathje-Allainmat, Monique; Andrieux, Jean; Langlois, Michel
CORPORATE SOURCE: Faculte de Pharmacie, BIOCIS-CNRS (URA 1843), Chatenay-Malbry, 92296, Fr.
SOURCE: Expert Opinion on Therapeutic Patents (1997), 7(12), 1447-1458
CODEN: EOTPEG; ISSN: 1354-3776
PUBLISHER: Ashley Publications
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review, with 90 refs. In recent years, many physiol. properties of melatonin have been described resulting in much interest in the development of synthetic compds. possessing agonist or antagonist properties for melatonin receptors. These compds. have structural similarity to melatonin, being derivs. of either substituted tryptamines or of bioisosteric moieties of the indole ring such as benzothiophene, indene and naphthalene. Research to determine the structural parameters of the melatonergic pharmacophore led to the synthesis of potent constrained, polycyclic compds. The important roles of substitutions on the 2 position of the indole ring and of the alkyl chain of the acyl group have been highlighted. The ethylamido chain seems to prefer the flexible conformation and a folded conformer has been shown to be the active conformation. Almost all of the compds. described have been patented. They have been claimed to be useful for the treatment of depression, sleep disorders and disturbances of circadian rhythm. Some patents have claimed also anti-ovulatory or antiproliferative properties. No compds. developed so far discriminate between the different melatonin receptor subtypes and few compds. have been described as antagonists for melatonin receptors.
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
REFERENCE COUNT: 120 THERE ARE 120 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 25 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1997:292735 HCAPLUS
DOCUMENT NUMBER: 127:8
ORIGINAL REFERENCE NO.: 127:2h,3a

stn

TITLE: Developments in purine and pyridimidine receptor-based therapeutics
AUTHOR(S): Spedding, Michael; Williams, Michael
CORPORATE SOURCE: Science Reunion, Servier, Nevilly sur Seine, Fr.
SOURCE: Drug Development Research (1997), Volume Date 1996, 39(3/4), 436-441
CODEN: DDREDK; ISSN: 0272-4391
PUBLISHER: Wiley-Liss
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with many refs. Progress in the identification of novel P1 and P2 receptor ligands has continued to lag behind the explosion in receptor cloning, especially in the P2 area. Nonetheless, a number of novel chemical entities and natural receptor ligands are continuing to advance in clin. trials or, alternatively have become important new tools to study receptor function. Compds. of note with activity at the P1 receptor family include NNC 21-0136 (A1 agonist; preclin.; stroke); SCH 59761 (nonselective P1 agonist; preclin.; cardiovascular disorders); the A1 antagonists, KFM-19 (BIIP-20; phase II) and MDL 102,503 development (status unknown) that may have therapeutic potential as cognition enhancers. KF 17837 and related A2A-antagonists such as KW 6002 represent potential novel treatments for Parkinson's disease. SCH 58261 (A2A receptor antagonist; preclin.) is a novel nonxanthine antagonist ligand. KW 3902 (phase II), FK-453/FK 113453 (possibly discontinued) and CVT-124 (phase I) are A1 receptor-selective xanthine-based antagonists that have potential in the treatment of renal diseases. NNC 53-0055 (preclin.) is the first of a new series of selective A3 receptor agonists that modulate cytokine production MRS 1067, MRS 1067, MRS 1097, MRS 1222, L-249, 313, and L-268, 605 (all preclin.) represent new A3-receptor antagonists. GP 3269 (preclin.) is an adenosine kinase inhibitor with potential efficacy in septic shock, stroke, and pain. ARL 67085 (phase II) is an ATP bioisostere that is an antagonist of the P2T receptor that is the first of new generation of antithrombotic agents. Systemic ATP has reached phase II trials as a novel approach to metastasis regression. The pyrimidine nucleotide, UTP (phase II) is being examined as P2Y2 receptor agonist for the treatment of cystic fibrosis.
OS.CITING REF COUNT: 15 THERE ARE 15 CAPLUS RECORDS THAT CITE THIS RECORD (15 CITINGS)
REFERENCE COUNT: 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 26 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1997:29748 HCAPLUS
DOCUMENT NUMBER: 126:69586
ORIGINAL REFERENCE NO.: 126:13317a
TITLE: Chemometric methods in drug design: tale or tool?
AUTHOR(S): Franke, R.
CORPORATE SOURCE: Consulting in Drug Design GbR, Basdorf, D-16352, Germany
SOURCE: Bioactive Compound Design (1996), 89-98.
Editor(s): Ford, Martyn G. Bios Scientific Publishers: Oxford, UK.
CODEN: 63SXAI
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English

Updated Search

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AB A review with 8 refs. Classical QSAR methods still play an important role in drug design and will gain in importance with the advent of high-throughput screening systems. They can provide information about the mechanism of action provided that certain conditions are met. One condition is the correctness of parameters used. Examples for necessary corrections for computed log P values are presented. Another important issue are colinearities which can be avoided by series design techniques. QSARs have provided certain rules which can be very helpful in the development of drugs. A typical example is the bioisosteric replacement of substituents to improve pharmacokinetic properties. Very important but greatly neglected in QSAR work are activity-activity relationships. Several examples are presented including relationships between results from in vitro and in vivo tests, multivariate relationships from batteries of tests, and structure-selectivity relationships.
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L9 ANSWER 27 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1996:719922 HCAPLUS
DOCUMENT NUMBER: 126:186
ORIGINAL REFERENCE NO.: 126:27a,30a
TITLE: Molecular variations based on isosteric replacements
AUTHOR(S): Wermuth, Camille G.
CORPORATE SOURCE: Faculte de Pharmacie, Universite Louis Pasteur, Illkirch, 67401, Fr.
SOURCE: Practice of Medicinal Chemistry (1996), 203-237. Editor(s): Wermuth, Camille G. Academic: London, UK.
CODEN: 63RFAR
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review with 120 refs. The replacement in an active mol. of an atom or a group of atoms by another one presenting a comparable electronic and steric arrangement is based on the concept of isosterism. When in addition to their physicochem. analogy, compds. share some common biol. properties, the term bioisosterism is used. The use of isosterism in medicinal chemical is discussed.
OS.CITING REF COUNT: 59 THERE ARE 59 CAPLUS RECORDS THAT CITE THIS RECORD (59 CITINGS)

L9 ANSWER 28 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1996:710166 HCAPLUS
DOCUMENT NUMBER: 126:6
ORIGINAL REFERENCE NO.: 126:3a
TITLE: Bioisosterism: A rational approach in drug design
AUTHOR(S): Patani, George A.; LaVoie, Edmond J.
CORPORATE SOURCE: College of Pharmacy, Rutgers The State University of New Jersey, Piscataway, NJ, 08855-0789, USA
SOURCE: Chemical Reviews (Washington, D. C.) (1996), 96(8), 3147-3176
CODEN: CHREAY; ISSN: 0009-2665
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

Updated Search

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AB A review, with 191 refs., on bioisosteres that incorporates sufficient detail to enable the reader to understand the concepts being delineated. Classical bioisosteres, such as monovalent atoms and groups, divalent isosteres, trivalent atoms and groups, tetra substituted atoms, and ring equivalent, and non-classical bioisosteres , such as cyclic vs. non-cyclic non-classical bioisosteric replacements and non-classical bioisosteric replacements of functional groups, are discussed.
OS.CITING REF COUNT: 331 THERE ARE 331 CAPLUS RECORDS THAT CITE THIS RECORD (331 CITINGS)
REFERENCE COUNT: 191 THERE ARE 191 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 29 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1996:272175 HCAPLUS
DOCUMENT NUMBER: 124:331429
ORIGINAL REFERENCE NO.: 124:61137a,61140a
TITLE: Similarities in bioanalogous structural transformation patterns among various bioactive compound series
AUTHOR(S): Fujita, Toshio
CORPORATE SOURCE: Emil Project, Fujitsu Kansai Syst. Lab., Osaka, 540, Japan
SOURCE: Bioscience, Biotechnology, and Biochemistry (1996), 60(4), 557-66
CODEN: BBBIEJ; ISSN: 0916-8451
PUBLISHER: Japan Society for Bioscience, Biotechnology, and Agrochemistry
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review, with 84 refs. Successful structural transformations of bioactive compds. into newer skeletal structures by replacing the substructure with others, the features of which are not necessarily similar to but more or less drastically varied from the original one, were proposed to be called being made "bioanalogously" instead of " bioisosterically". Precedents of the bioanalogous replacements of substructures composed of the amide, urea, and related components with others were explored. Anilides, N-phenylureas, and N-phenylcarbamates are bioanalogous as herbicides and topical antiseptics. The bioanalogy can be expanded to include substructures containing ester as well as ether components when local anesthetics are considered together. The polar hydrogen-bonding groups such as (thio)urea, cyanoguanidine, and nitroethenediamine substructures found in histamine H2-receptor antagonists are also bioanalogous in various other bioactive compound series. The open-chain amides and the corresponding "carbonylogously" ring-closured dicarboximides are bioanalogous in agrochems. and antiandrogens as well as in CNS (central nervous system)-active agents. Very often, similarities in the substructural transformation patterns are observed in various bioanalogous series regardless of differences in the pharmacol. category. The observations could be used to predict newer generation structures from an ultimate lead structure.
OS.CITING REF COUNT: 12 THERE ARE 12 CAPLUS RECORDS THAT CITE THIS RECORD (12 CITINGS)

L9 ANSWER 30 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1996:74550 HCAPLUS

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DOCUMENT NUMBER: 124:137953
ORIGINAL REFERENCE NO.: 124:25467a,25470a
TITLE: Synthetic pro-oxidants: Drugs, pesticides and other environmental pollutants
AUTHOR(S): Stohs, Sidney J.
CORPORATE SOURCE: School Pharmacy and Allied Health Professions, Creighton University, Omaha, NE, 68178, USA
SOURCE: Oxidative Stress and Antioxidant Defenses in Biology (1995), 117-80. Editor(s): Ahmad, Sami. Chapman & Hall: New York, N. Y.
CODEN: 62FOAL
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review with many refs. in which the abilities of various chemical related groups of compds. to induce the formation of reactive oxygen species, and produce an oxidative stress with resultant tissue damaged are discussed. Haloalkanes, polyhalogenated cyclic pesticides, phorbol esters, paraquat and diquat, quinones, quinolones, dioxin and its bioisosteres, transition metals, and cation complexes are reviewed.
OS.CITING REF COUNT: 17 THERE ARE 17 CAPLUS RECORDS THAT CITE THIS RECORD (17 CITINGS)

L9 ANSWER 31 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1996:24099 HCAPLUS
DOCUMENT NUMBER: 124:75379
ORIGINAL REFERENCE NO.: 124:13753a,13756a
TITLE: Anthracene-9,10-diones and aza bioisosteres as antitumor agents
AUTHOR(S): Krapcho, A. Paul; Maresch, Martin J.; Hacker, Miles P.; Hazelhurst, Lori; Menta, Ernesto; Oliva, Ambrogio; Spinelli, Silvano; Beggiolin, Gino; Giuliani, Fernando C.; et al.
CORPORATE SOURCE: Dep. Chem. Pharmacol., Univ. Vermont, Burlington, VT, 05405, USA
SOURCE: Current Medicinal Chemistry (1995), 2(4), 803-24
CODEN: CMCHE7; ISSN: 0929-8673
PUBLISHER: Bentham Science Publishers BV
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 158 refs. Naturally occurring quinones which structurally consist of an anthracene-9,10-dione chromophore are important antitumor agents. The anthracycline antibiotics, in particular, doxorubicin, are major chemotherapeutic agents. The pluramycins and the ene-diynes antibiotics also show promise as antitumor drugs. The synthetic anthracene-9,10-diones such as mitoxantrone are potent antitumor agents. Analogs related to mitoxantrone have been synthesized and biol. evaluated. Aza and diaza bioisosteres related to the anthracene-9,10-diones have been prepared and evaluated and several of these chemotypes show promise for development as anticancer agents. This review will discuss the discovery of cytotoxic anthracene-9,10-diones and the synthesis and antitumor properties of the related aza ana diaza bioisosteres.
OS.CITING REF COUNT: 54 THERE ARE 54 CAPLUS RECORDS THAT CITE THIS RECORD (54 CITINGS)

L9 ANSWER 32 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN

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ACCESSION NUMBER: 1995:970984 HCAPLUS
DOCUMENT NUMBER: 124:44541
ORIGINAL REFERENCE NO.: 124:8135a,8138a
TITLE: P2-purinoceptors: Advances and therapeutic opportunities
AUTHOR(S): Williams, Michael; Jacobson, Kenneth A.
CORPORATE SOURCE: Pharmaceutical Products Division, Abbott Laboratories, Abbott Park, IL, 60064, USA
SOURCE: Expert Opinion on Investigational Drugs (1995), 4(10), 925-34
CODEN: EOIDER; ISSN: 0967-8298
PUBLISHER: Ashley Publications
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 52 refs. The recent cloning of a number of distinct receptors belonging to the P2-purinoceptor superfamily has provided conclusive evidence for a pivotal role for ATP and other nucleotides as effector mols. involved in cell-to-cell communication and the modulation of many basic aspects of tissue function. ATP itself is being clin. evaluated as a cytotoxic agent for the treatment of cancer and as an adjunct to inhalation anesthetic use. The pyrimidine nucleotide, UTP, is in clin. trials for the treatment of cystic fibrosis. The stable ATP bioisostere, ARL 67085, is being developed as a novel antithrombotic agent, blocking with a superior safety profile and increased efficacy as compared to other agents. The diversity of P2 receptors, with eleven having been defined using both pharmacol. and mol. cloning criteria, indicates considerable addnl. potential and subtlety in regard to the effects of ATP on tissue function and pathophysiol.
OS.CITING REF COUNT: 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS RECORD (10 CITINGS)

L9 ANSWER 33 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1995:963229 HCAPLUS
DOCUMENT NUMBER: 124:2955
ORIGINAL REFERENCE NO.: 124:667a,670a
TITLE: Quantitative structure-activity analysis and database-aided bioisosteric structural transformation procedure as methodologies of agrochemical design
AUTHOR(S): Fujita, Toshio
CORPORATE SOURCE: Dep. of Agricultural Chemistry, Kyoto Univ., Kyoto, 606-01, Japan
SOURCE: ACS Symposium Series (1995), 606(Classical and Three-Dimensional QSAR in Agrochemistry), 13-34
CODEN: ACSMC8; ISSN: 0097-6156
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review and discussion with 73 refs. The Hansch-type QSAR applications to a number of agrochem. series of compds. are discussed. Because the QSAR procedure utilizes principles of phys. organic chemical, clues for the mol. mechanism of action have been disclosed in many cases. From the QSAR models, new congeneric structures having the optimum activity profiles have been successfully predicted for some series. For generation of non-congeneric novel structures, a system named EMIL was constructed , which incorporates a database for structural "evaluation" examples and a

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data-processing engine. In fact, the QSAR and EMIL procedures are complementary to each other under a category of computer-assisted empirical methodologies. In the QSAR procedure, the empirical model is built by math. equations describing correlations between variations in structure and bioactivity with use of physicochem. substituent and (sub) structural parameters. In the EMIL procedure, structural modification patterns, including those which are non-isometric, collected from the past structural evolution examples are used as empirical "rules" for " bioisosteric" structural transformations in a broader sense. The rules are applied to the primary lead structure to generate candidate structures having elaborated features. Methodol. backgrounds as well as characteristic distinctions of these procedures are presented on the basis of successful topics for the agrochem. design.

OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)

L9 ANSWER 34 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1995:886601 HCAPLUS
DOCUMENT NUMBER: 123:305844
ORIGINAL REFERENCE NO.: 123:54499a,54502a
TITLE: Bioisosteric replacement and development of lead compounds in drug designs
AUTHOR(S): Zhao, Guofeng; Yang, Huazeng
CORPORATE SOURCE: Inst. Elemental Org. Chem., Nankai Univ., Tianjin, Peop. Rep. China
SOURCE: Huaxue Tongbao (1995), (6), 34-8
CODEN: HHTPAU; ISSN: 0441-3776
PUBLISHER: Kexue
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Chinese
AB A review with 10 refs. discussing roles of bioisosteric replacement and development of lead compds. in drug designs. Design of antihistaminic imidazole compds. is given as an example.
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L9 ANSWER 35 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1995:673233 HCAPLUS
DOCUMENT NUMBER: 123:75017
ORIGINAL REFERENCE NO.: 123:13094h,13095a
TITLE: Structure-activity relationships of melatonin analogs
AUTHOR(S): Caignard, Daniel-Henri; Lesieur, Daniel; Depreux, Patrick; Renard, Pierre; Delagrange, Philippe; Guardiola-Lemaitre, Beatrice
CORPORATE SOURCE: ADI/Institut de Recherches Internationales Servier, Courbevoie, 92415, Fr.
SOURCE: European Journal of Medicinal Chemistry (1995), 30(Suppl., Proceedings of the 13th International Symposium on Medicinal Chemistry, 1994), 637s-42s
CODEN: EJMCA5; ISSN: 0223-5234
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review, with 14 refs. It has been demonstrated that the indole ring of melatonin is not an essential characteristic of the mol. for either its affinity for the melatonin receptor or for its biol. activity, as it can

be replaced by a naphthalene bioisostere. While substitution of the nitrogen in the indole ring by either S (benzothiophene) and O (benzofuran) can be tolerated, they both reduce binding affinities to some extent, and the latter substitution elicits effects which cannot be presently explained. Homologous extension of the N-acetyl side chain of the naphthalenic analog together with other modifications can increase the affinity of the compds. for the melatonin receptor over that of melatonin itself. Furthermore some of these modifications have produced analogs which show biphasic rather than monophasic binding curves. Such data would he consistent with either the presence of two distinct receptor subtypes or detection of the receptor in two different affinity states.

L9 ANSWER 36 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1995:349878 HCAPLUS
DOCUMENT NUMBER: 122:125813
ORIGINAL REFERENCE NO.: 122:23363a,23366a
TITLE: Bioisosterism in agrochemicals.
AUTHOR(S): Koyanagi, Tohru; Haga, Takahiro
CORPORATE SOURCE: Central Res. Inst., Ishihara Sangyo Kaisha Ltd., Shiga, 525, Japan
SOURCE: ACS Symposium Series (1995), 584(Synthesis and Chemistry of Agrochemicals IV), 15-24
CODEN: ACSMC8; ISSN: 0097-6156
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 24 refs. Bioisosterism is one of the sophisticated optimizations useful for designing new structures for agrochems. This principle was useful, as shown by a large nos. of successes in mol. optimization. Examples of applications for new agrochems., is given.
OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L9 ANSWER 37 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1994:260311 HCAPLUS
DOCUMENT NUMBER: 120:260311
ORIGINAL REFERENCE NO.: 120:45773a,45776a
TITLE: Some observations on classical QSAR
AUTHOR(S): Topliss, John G.
CORPORATE SOURCE: Coll. Pharm., Univ. Michigan, Ann Arbor, MI, 48109-1065, USA
SOURCE: Perspectives in Drug Discovery and Design (1993), 1(2), 253-68
CODEN: PDDDEC; ISSN: 0928-2866
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 72 refs. Classical QSAR began almost 30 yr ago. This article briefly traces its development, use, and impact in relation to drug design and medicinal chemical Particular aspects discussed include hydrophobicity, relative potency in a series, tissue selectivity, central nervous system penetration, pharmacokinetics, potency optimization, bioisosterism, mechanistic insights, synthesis termination, receptor mapping, and the design of marketed drugs and late-stage drug candidates. In addition, some recent QSAR studies and examples of the use of the Free-Wilson approach are reviewed.

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OS.CITING REF COUNT: 11 THERE ARE 11 CAPLUS RECORDS THAT CITE THIS RECORD (11 CITINGS)

L9 ANSWER 38 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1994:6 HCAPLUS
DOCUMENT NUMBER: 120:6
ORIGINAL REFERENCE NO.: 120:1a
TITLE: Application of bioisosterism to new drug design
AUTHOR(S): Yun, Sung Hwa
CORPORATE SOURCE: Ind. Chem. Dep., Azu Univ., S. Korea
SOURCE: Hwahak Sekye (1993), 33(8), 576-9
CODEN: HWSEEX; ISSN: 1225-004X
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Korean
AB A review with 5 refs. which discusses definition of isosteres, application of bioisosterism for mol. modification, and some recent examples of nonclassical isosteres for drug improvement in potency, selectivity, and duration of action.

L9 ANSWER 39 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1993:616556 HCAPLUS
DOCUMENT NUMBER: 119:216556
ORIGINAL REFERENCE NO.: 119:38313a,38316a
TITLE: Studies of a novel series of thiazole-containing 5-hydroxytryptamine-3 receptor antagonists
AUTHOR(S): Rosen, Terry; Nagel, Arthur A.; Rizzi, James P.
CORPORATE SOURCE: Centr. Res. Div., Pfizer Inc., Groton, CT, 06340, USA
SOURCE: Drug Des. Neurosci. (1993), 213-30, 4 plates. Editor(s): Kozikowski, Alan P. Raven: New York, N. Y.
CODEN: 59IIAM
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review with 30 refs. on a novel series of 5-HT3 receptor antagonists. Computer modeling studies were utilized to identify a hypothetical pharmacophore for 5-HT3 receptor binding. This model was utilized to rationalize observed SAR as well as to guide SAR development. The modeling studies and SAR results suggest that the thiazole moiety in this series of agents is acting as a carbonyl bioisostere. Several of the compds. were shown to exhibit potent 5-HT3 receptor antagonism in vivo as well as penetrate the blood-brain barrier upon peripheral administration.
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L9 ANSWER 40 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1993:530757 HCAPLUS
DOCUMENT NUMBER: 119:130757
ORIGINAL REFERENCE NO.: 119:23225a,23228a
TITLE: Bioisosterism and design of peptidomimetics
AUTHOR(S): Marc, Gasper; Pecar, Slavko
CORPORATE SOURCE: Fac. Nat. Sci. Technol., Univ. Ljubljana, Ljubljana, 61000, Slovenia
SOURCE: Farmacevtski Vestnik (Ljubljana, Slovenia) (1993), 44(1), 3-22
CODEN: FMVTAV; ISSN: 0014-8229

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DOCUMENT TYPE: Journal; General Review
LANGUAGE: Slovenian
AB A review with 59 refs. on the role of bioisosterism in design of peptidomimetic drugs.

L9 ANSWER 41 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1992:439663 HCAPLUS
DOCUMENT NUMBER: 117:39663
ORIGINAL REFERENCE NO.: 117:6803a,6806a
TITLE: Centrally acting dopamine D2 receptor ligands: agonists
AUTHOR(S): Wikstroem, Haakan
CORPORATE SOURCE: Dep. Pharmacol., Univ. Goeteborg, Goeteborg, S-400 33, Swed.
SOURCE: Progress in Medicinal Chemistry (1992), 29, 185-216
CODEN: PMDCAY; ISSN: 0079-6468
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review, with 166 refs., of mol. biol. and pharmacol. of the D2 receptor, pharmacol. methods used in D2 receptor research, methods for screening new compds. for action on central dopaminergic (DA) receptors, structural classes of D2 agonists, metabolism problems and bioisosteric replacements in D2 agonists, possibility of basic N atom charging in drug-receptor interaction mol. modeling of D2 ligands, DA agonist receptor models, and D2 autoreceptor antagonists, functional D2 receptor agonists.
OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L9 ANSWER 42 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1992:75528 HCAPLUS
DOCUMENT NUMBER: 116:75528
ORIGINAL REFERENCE NO.: 116:12619a,12622a
TITLE: Isosterism and bioisosterism in drug design
AUTHOR(S): Burger, Alfred
CORPORATE SOURCE: Dep. Chem., Univ. Virginia, Charlottesville, VA, 22901, USA
SOURCE: Progress in Drug Research (1991), 37, 287-371
CODEN: FAZMAE; ISSN: 0071-786X
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 314 refs.
OS.CITING REF COUNT: 85 THERE ARE 85 CAPLUS RECORDS THAT CITE THIS RECORD (86 CITINGS)

L9 ANSWER 43 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1992:59240 HCAPLUS
DOCUMENT NUMBER: 116:59240
ORIGINAL REFERENCE NO.: 116:10249a,10252a
TITLE: Synthesis and pharmacological evaluation of 4,4a-dihydro-5H-[1]-benzopyrano[4,3-c]pyridazin-3(2H)-ones: bioisosteres of antihypertensive and antithrombotic benzo[h]cinnolinones
AUTHOR(S): Winwood, David
CORPORATE SOURCE: Xenon Vision, USA

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SOURCE: Chemtracts: Organic Chemistry (1991), 4(4), 312-15
CODEN: CMOCEI; ISSN: 0895-4445
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB The title research of G. Cignarella, et. al (1990) is reviewed with commentary and 4 refs.

L9 ANSWER 44 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1992:50643 HCAPLUS
DOCUMENT NUMBER: 116:50643
ORIGINAL REFERENCE NO.: 116:8559a,8562a
TITLE: Bioisosterism: Important strategy in molecular changes in the development of new drugs. Part I
AUTHOR(S): Barreiro, Eliezer J.
CORPORATE SOURCE: Dep. Tecnol. Farm., Fac. Farm., Rio de Janeiro, 21941, Brazil
SOURCE: Revista Brasileira de Farmacia (1991), 72(1), 2-7
CODEN: RBFAAH; ISSN: 0370-372X
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Portuguese
AB A review with 50 refs.
OS.CITING REF COUNT: 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)

L9 ANSWER 45 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1992:50640 HCAPLUS
DOCUMENT NUMBER: 116:50640
ORIGINAL REFERENCE NO.: 116:8559a,8562a
TITLE: Bioisosterism: Important strategy for molecular modification for the rational design of drugs. Part II
AUTHOR(S): Barreiro, Eliezer J.
CORPORATE SOURCE: Brazil
SOURCE: Revista Brasileira de Farmacia (1991), 72(2), 34-8
CODEN: RBFAAH; ISSN: 0370-372X
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Portuguese
AB A review with 91 refs.
OS.CITING REF COUNT: 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD (9 CITINGS)

L9 ANSWER 46 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1991:647268 HCAPLUS
DOCUMENT NUMBER: 115:247268
ORIGINAL REFERENCE NO.: 115:41837a,41840a
TITLE: The substituent parameter database: a powerful tool for QSAR analysis
AUTHOR(S): Boyd, Donald B.; Seward, Catherine M.
CORPORATE SOURCE: Lilly Res. Lab., Eli Lilly and Co., Indianapolis, IN, 46285, USA
SOURCE: Pharmacochemistry Library (1991), 16(QSAR: Ration. Approaches Des. Bioact. Compd.), 167-70

Updated Search

CODEN: PHLIDQ; ISSN: 0165-7208
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 19 refs. The substituent parameter database has proved to be a powerful tool for computer-assisted mol. design studies. QSAR, which has been particularly successfully in mol. design, is greatly expedited by having the database available for retrieving data, identifying potential bioisosteres, and devising SAR strategies to maximum the amount of information derivable from each compound synthesized.

L9 ANSWER 47 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1991:441128 HCAPLUS
DOCUMENT NUMBER: 115:41128
ORIGINAL REFERENCE NO.: 115:6941a,6944a
TITLE: Antagonistic amino acids and carbohydrates from microbial sources
AUTHOR(S): Inouye, Shigeharu; Sezaki, Masaji
CORPORATE SOURCE: Pharm. Res. Cent., Meiji Seika Kaisha, Ltd., Yokohama, 222, Japan
SOURCE: Meiji Seika Kenkyu Nenpo (1990), (29), 43-122
CODEN: MSKNA9; ISSN: 0465-6105
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A review, with 315 refs., on antimetabolic amino acid analogs AL-719, MK1812, SF2369, SF1836, SF2185, SF2312, SF2448, SF1346, SF2538, SF1293, SF1293B, SF2253, HS-1, SF2339, and SF2513. Carbohydrate analogs include nojirimycin, its derivs., SF-666A, oligostatins, and SF1768. Their screening methods and structure-activity relationships are discussed. Topics also include bioisosteres of natural amino acids and carbohydrates.

L9 ANSWER 48 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1991:161279 HCAPLUS
DOCUMENT NUMBER: 114:161279
ORIGINAL REFERENCE NO.: 114:27203a,27206a
TITLE: Design of sweeteners. A rational approach
AUTHOR(S): Tinti, Jean Marie; Nofre, Claude
CORPORATE SOURCE: Fac. Med. Alexis Carrel, Univ. Claude Bernard, Lyon, 69008, Fr.
SOURCE: ACS Symposium Series (1991), 450(Sweeteners), 88-99
CODEN: ACSMC8; ISSN: 0097-6156
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review and discussion with 23 refs. The successive discoveries of several series of hyperpotent sweeteners (higher than 40,000 times that of sucrose) are the result of a rational approach in their design. First it was proved that CO2- and NO2/CN groups, previously considered in sweeteners as identical interaction sites (B site in Shallenberger/Acree's theory) in fact form 2 sep. specific sites B and D. This D site was identified in sweet B-alanine derivs. and a new predictive model was designed which led to the first hybrids between sweetener series (sweet dipeptides and β-alanine derivs.). One of them, a thioureido derivative of aspartame was 50,000 times sweeter than sucrose. Bioisosteric analogies were used to synthesize the first guanidine sweeteners with

potencies up to 50,000. Improving the hydrophobic site (G site), resulted in a potency of 200,000 with sucrononic acid, the sweetest compound known.
OS.CITING REF COUNT: 24 THERE ARE 24 CAPLUS RECORDS THAT CITE THIS RECORD (24 CITINGS)

L9 ANSWER 49 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1990:490746 HCAPLUS
DOCUMENT NUMBER: 113:90746
ORIGINAL REFERENCE NO.: 113:15079a,15082a
TITLE: Acidic isostere design: synthetic strategies and recent progress in understanding electronic properties and metabolic stability
AUTHOR(S): Lipinski, Christopher A.; Chenard, Bert L.
CORPORATE SOURCE: Pfizer Cent. Res., Groton, CT, 06340, USA
SOURCE: Pesticide Science (1990), 29(2), 227-40
CODEN: PSSCBG; ISSN: 0031-613X
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 34 refs. The efficient synthesis of a family of twelve acidic heterocycles (mercaptoazoles) of varying acidity from a single common intermediate facilitates the search for new acidic bioisosteres. An extension of this chemical approach led to a new family of phosphonate replacements in prototypes related to the N-methyl-D-aspartate (NMDA) antagonist 2-amino-7-phosphophonheptanoic acid (AP7). Acidic isostere design may be facilitated by grouping hydroxylic heterocycic carboxylic isosteres into one of two electronic classes based on the Gandour hypothesis. The limitations of normal hydroxamic acids as carboxylic acid surrogates suggest that the excellent metabolic stability of reverse hydroxamic acids may be useful in prospective acidic isostere design.
OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

L9 ANSWER 50 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1987:12094 HCAPLUS
DOCUMENT NUMBER: 106:12094
ORIGINAL REFERENCE NO.: 106:1977a,1980a
TITLE: Bioisosterism in drug design
AUTHOR(S): Lipinski, Christopher A.
CORPORATE SOURCE: Pfizer Cent. Res., Groton, CT, 06340, USA
SOURCE: Annual Reports in Medicinal Chemistry (1986), 21, 283-91
CODEN: ARMCBI; ISSN: 0065-7743
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 94 refs. on bioisosteres (groups of mols. which have chemical and phys. similarities producing broadly similar biol. properties) in drug design. Bioisosterism is part of the spectrum of QSAR.
OS.CITING REF COUNT: 37 THERE ARE 37 CAPLUS RECORDS THAT CITE THIS RECORD (37 CITINGS)

L9 ANSWER 51 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1986:28257 HCAPLUS
DOCUMENT NUMBER: 104:28257
ORIGINAL REFERENCE NO.: 104:4501a,4504a

stn

TITLE: Quantum pharmacology
AUTHOR(S): Richards, W. Graham
CORPORATE SOURCE: Phys. Chem. Lab., Oxford, UK
SOURCE: Umschau (1982) (1985), 85(11), 692-8
CODEN: UMSCDV; ISSN: 0722-8562
DOCUMENT TYPE: Journal; General Review
LANGUAGE: German
AB A review with 12 refs. The use of quantum chemical in the design of pharmacol. active mols. and in the understanding of their action is discussed with respect to the structure of receptor-bound drugs, electron configuration, bioisosteric parameters, and the computer-graphic representation of mols.
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L9 ANSWER 52 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1985:72221 HCAPLUS
DOCUMENT NUMBER: 102:72221
ORIGINAL REFERENCE NO.: 102:11183a,11186a
TITLE: Clinical consequences of the lipophilicity and plasma protein binding of antiarrhythmic drugs and active metabolites in man
AUTHOR(S): Drayer, Dennis E.
CORPORATE SOURCE: Med. Coll., Cornell Univ., New York, NY, 10021, USA
SOURCE: Annals of the New York Academy of Sciences (1984), 432(Clin. Pharmacol. Card. Antiarrhythmic Agents), 45-56
CODEN: ANYAA9; ISSN: 0077-8923
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review and discussion with 23 refs. on the relation of lipophilicity, plasma protein binding, and pharmacokinetic properties of β-blockers and antiarrhythmic drugs. In addition, a discussion is given of bioisosterism (the structural modification of a drug to give a compound with similar therapeutic properties but fewer undesirable side effects).
OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

L9 ANSWER 53 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1981:532571 HCAPLUS
DOCUMENT NUMBER: 95:132571
ORIGINAL REFERENCE NO.: 95:22195a,22198a
TITLE: Biosteric thiophenes
AUTHOR(S): Boehm, Ralf
CORPORATE SOURCE: Sekt. Pharm., Martin-Luther-Univ., Halle-Wittenberg, Ger. Dem. Rep.
SOURCE: Wissenschaftliche Zeitschrift - Martin-Luther-Universitaet Halle-Wittenberg, Mathematisch-Naturwissenschaftliche Reihe (1981), 30(2), 3-16
CODEN: WMHMAP; ISSN: 0043-6887
DOCUMENT TYPE: Journal; General Review
LANGUAGE: German
AB A review with 59 refs.

Updated Search

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L9 ANSWER 54 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1974:499125 HCAPLUS
DOCUMENT NUMBER: 81:99125
ORIGINAL REFERENCE NO.: 81:15637a,15640a
TITLE: Bioisosteres of the indole messengers
AUTHOR(S): Campaigne, E.; Maickel, R. P.; Bosin, T. R.
CORPORATE SOURCE: Dep. Chem., Indiana Univ., Bloomington, IN, USA
SOURCE: Med. Chem., Spec. Contrib. Int. Symp., 3rd (1973), Meeting Date 1972, 65-81. Editor(s): Pratesi, P. Butterworth: London, Engl.
CODEN: 28VOAV
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review with 31 refs. of the preparation and structure-activity relations of indole messenger bioisosteres.
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L9 ANSWER 55 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1967:36280 HCAPLUS
DOCUMENT NUMBER: 66:36280
ORIGINAL REFERENCE NO.: 66:6875a,6878a
TITLE: General aspects of structure-action relationships
AUTHOR(S): Martin-Smith, Michael
CORPORATE SOURCE: Univ. Strathclyde, Strathclyde, UK
SOURCE: Pharmaceutical Journal (1966), 197(5378), 557-63
CODEN: PHJOAV; ISSN: 0031-6873
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A review of the factors which limit the correlation of drug structure and activity such as lack of knowledge of the intimate chemical constitutions of the cellular mol. species interacting with the drug, the role of biotransformation, importance of the ultimate pharmacol. mechanism, variables in the biol. system used to test the drug (genetic variables, age and size, general condition of health), variables in the conditions under which the drug is administered, concept of structural specificity, concept of metabolic displacement, identifiable mol. features of moieties of structurally specific drugs, the concept of bioisosterism, supporting moiety theory, concept of drug latentiation, and the rationale behind modifications of the mol. structure of drugs of proven efficacy. 35 references.

L9 ANSWER 56 OF 56 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1967:1259 HCAPLUS
DOCUMENT NUMBER: 66:1259
ORIGINAL REFERENCE NO.: 66:239a,242a
TITLE: Certain aspects of methods and hypotheses of research in chemical therapeutics
AUTHOR(S): Lespagnol, Albert; Lespagnol, Charles
CORPORATE SOURCE: Fac. Med. Pharm., Lille, Fr.
SOURCE: Chim. Ther. (1966), 66(3), 190-201; (4), 249-60; (5-6), 359-72
CODEN: CHTQAC
DOCUMENT TYPE: Journal
LANGUAGE: French

Updated Search

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AB A review with 73 references. Covered are the concepts of bioisosteres (those having the same type of biol. activity), structural antagonists, homologous series, and certain practical applications.

Updated Search